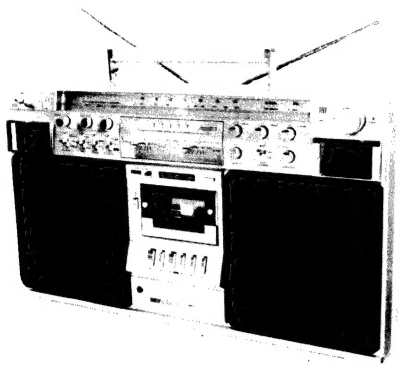
SV3-103B

SV3-103B

Gold Star Audio

SERVICE MANUAL

for service technician



Gold Star Co., Ltd.

STEREO CASSETTE RECORDER with AM/FM RADIO

TSR-800 (FM/SW/MW/LW)

TSR-805 (FM/SW_2/SW_1/MW)

SPECIFICATIONS

This specifications may be changed for improvement of performance without notice.

Radio section

Circuit system . . . . . .Superheterodyne system
Antenna
FM/SW2/SW . . . . . .Telescopic ant.
SW1/MW/LW . . . . . .Built-in ferrite bar ant.
Frequency range
FM . . . . . .88-109 MHz
SW2 . . . . . .7-2 MHz
SW . . . . . .6-18 MHz
SW1 . . . . . .2.3-7 MHz
MW . . . . . .515-1650 kHz
LW . . . . . .150-350 kHz
Intermediate freq.
AM . . . . . .455(465) kHz
FM . . . . . .10.7 MHz
Sensitivity Max (Usable)
FM . . . . . .8(14) dB
SW2, SW . . . . . 25(35) dB
SW1 . . . . . .36(46) dB
MW . . . . . .40(48) dB
LW . . . . . .50(58) dB
Signal to noise ratio
FM . . . . . .50 dB
SW2, SW . . . . . .45 dB
SW1 . . . . . 45 dB
MW . . . . . .46 dB
LW . . . . . .35 dB
FM Frequency response . . . . .100-10000 Hz (0±4dB)
FM stereo separation . . . . . .20 dB
Stereo LED sensitivity . . . . . .26 dB
Tuning LED sensitivity . . . . .AM: 54 dB
FM: 20 dB

Cassette section

Circuit system . . . . . .4 track 2ch. stereo
Recording system . . . . . .AC Bias (70 kHz)
Erasing system . . . . . .AC Erase
Tape speed 4.75 cm/sec
F.F. & REW time . . . . . .90 sec
Wow & Flutter . . . . . .0.04% (WRMS)
Frequency response . . . . . .P/B: 100-12000 Hz
REC/PB: 100-10000 Hz
Signal to Noise ratio . . . . . .P/B: 50 dB
REC/PB: 45 dB
Separation . . . . . .40 dB

General

Power output (10% T.H.D.) . . .6.2W+6.2W
Semiconductors . . . . . .8IC's, 34TR's, 34Diodes, 10LED's
Power consumptions 18W
Speakers . . . . . .Tweeter 5cm 4Ωx2
Woofer 20cm 4Ωx2
Weight . . . . . .9 Kg
Dimensions . . . . . .627(W)x358(H)x145(D) mm

Printed in Korea May, 1983

To the service technician

The service manual contains detailed service information for Model TSR-800 and TSR-805 with the exception of radio band function.

The basic difference between Model TSR-800 and TSR-805 is radio band.
For example:
Model TSR-800 has the functions of FM, SW, MW and LW.
Model TSR-805 has the functions of FM, SW1, SW2, and MW.
Illustration of the model appears on front cover.

Please give attention to next caution.
The followings are the safety servicing guidelines for all audio amplifiers and radio receivers.
Service work should be performed only after you are familiar with all of the following safety guide.
To do otherwise increases the rish of potential hazards and injury to the user.

Safety guide

1. Be sure that all components are positioned in such a way to avoid possibility of adjacent components shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Always replace all protective devices such as insulators and barriers after working on a receiver.
3. Check for frayed insulation on wires including the AC-cord. Also check across-the-line-components for damage and replace if necessary.
4. All fuses and certain resistors and capacitors which are of the flameproof type must be replaced with exact same types to prevent potential fire hazard.
5. After re-assembly of the set always perform an AC-leakage test on the exposed metallic parts of the cabinet such as the knobs, antenna terminal, etc. to be sure the set is safe to operate without danger of electrical shock.

To order repair parts

part orders must contain;

1. Model Number – found on front cover in this service manual.
2. Part Number, Description and Quantity.

CONTENTS

OPERATING CONTROLS

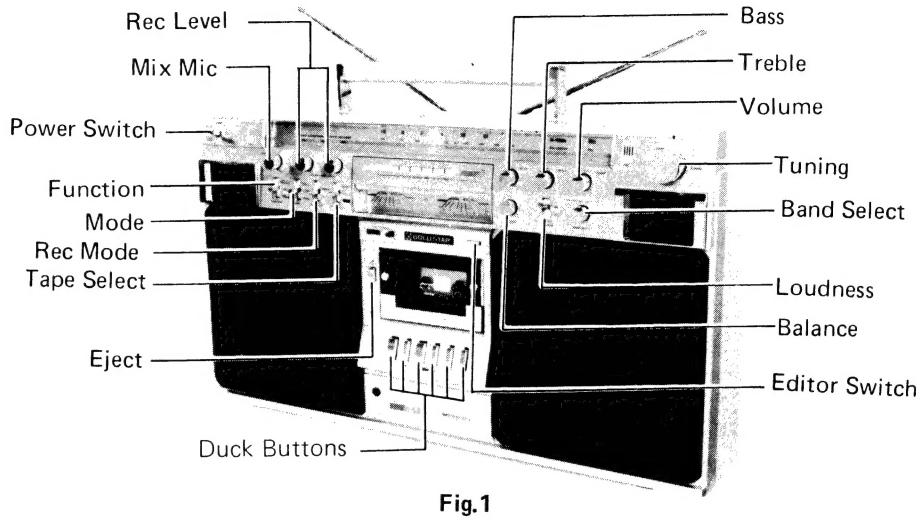


Fig.1

DISASSEMBLY INSTRUCTIONS

1. To remove front case

(1) Please pull out the round volume knobs such as tuning, Bass, treble etc.(see F;g.1) and open the cassette door with pressing the eject button.(see Fig.2)

(2) Remove seven screws Ⓐ and take out the front case (see Fig.3) At this time, remove connectors for serviceable work.(see Fig.4)

Fig.2

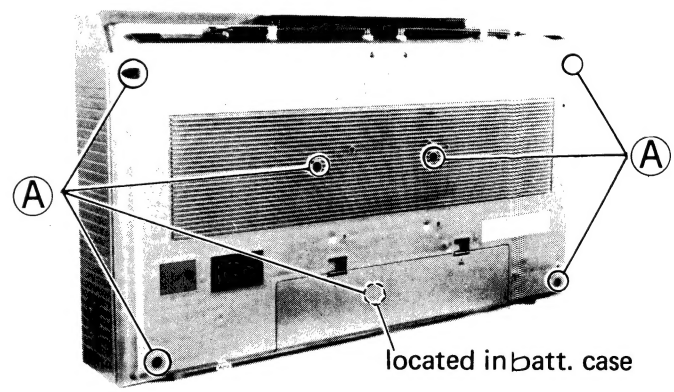


Fig.3

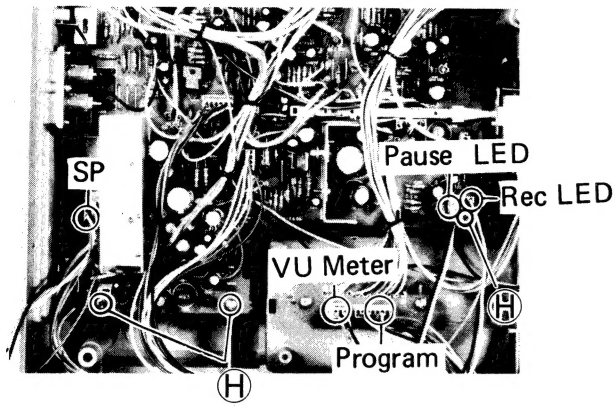


Fig.4

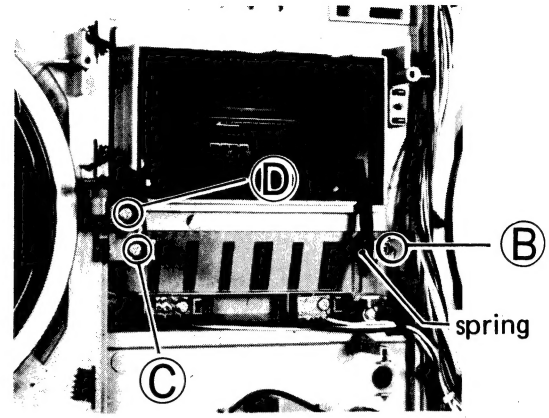


Fig.5

2. To service cassette door (see Fig.5)

(1) Remove screw Ⓑ and spring

(2) Remove screw Ⓒ and Ⓓ

3. To remove scale plate

(1) Remove screw Ⓔ (five) and move pointer to the groove to remove easily scale plate.

(2) To re-assemble toughly it, first of all, you must fix screw Ⓔ as shown in Fig.7.

(3) Please make sure of it if LED and LED hall are agree with each other or not.

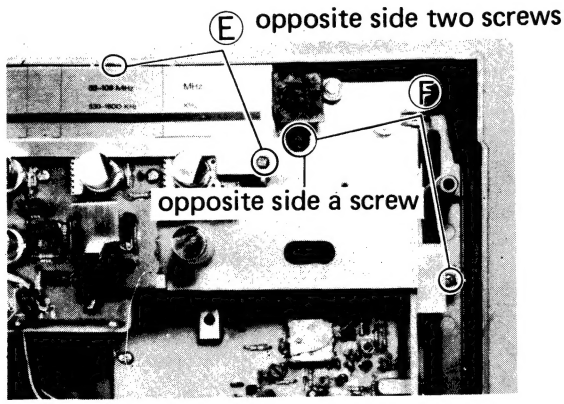


Fig. 6

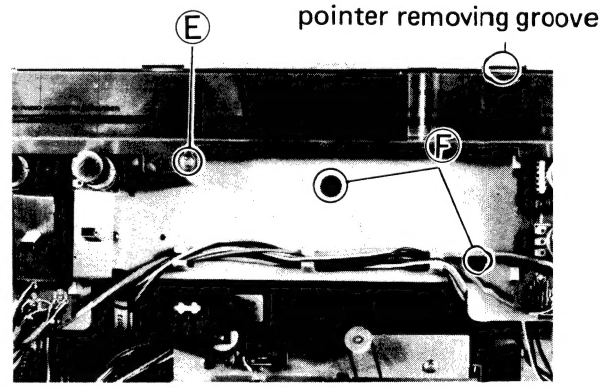


Fig. 7

4. To remove RF & AF PWB

(1) Remove screw Ⓕ (five). (see Fig.6.7)

(2) Remove serew Ⓖ (see Fig.8) and Ⓗ (six) as shown in Fig 4 & Fig. 9.

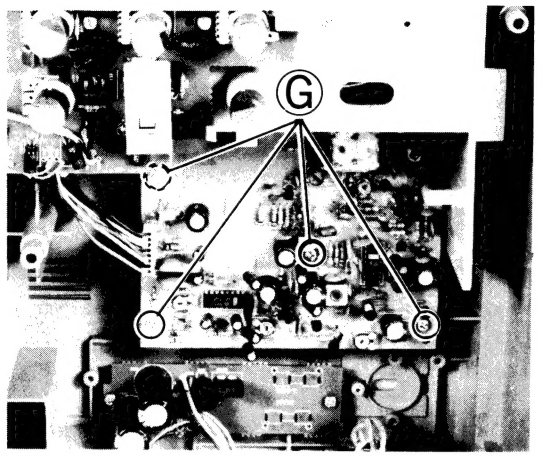


Fig. 8

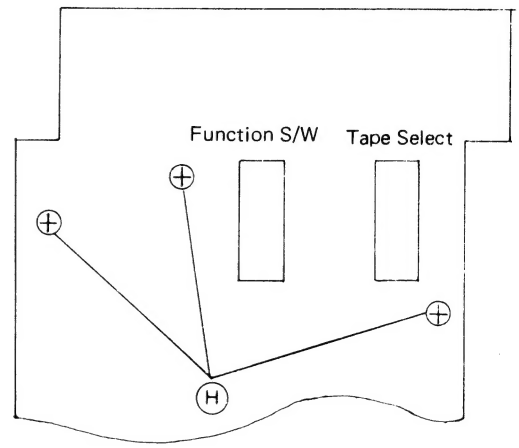


Fig. 9

(3) When re-assembling the chassis if Rec S/W Bracket is in touched with DECK AY, pull out the Rec S/W Bracket in direction of an arrow. (See Fig. 10)

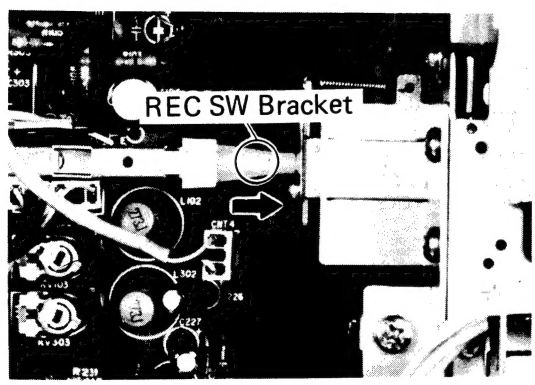


Fig. 10

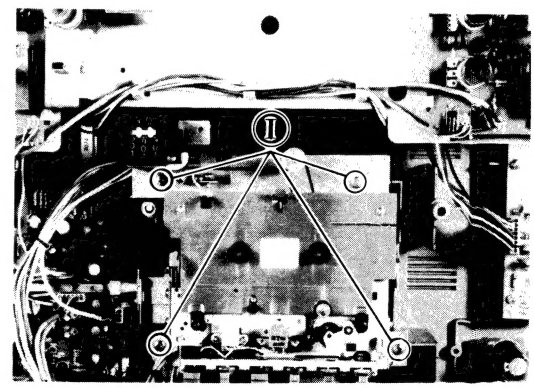


Fig. 11

5. To remove Deck Mechanism

Remove screw Ⓘ (see Fig.11)

DIAL CORD ARRANGEMENT

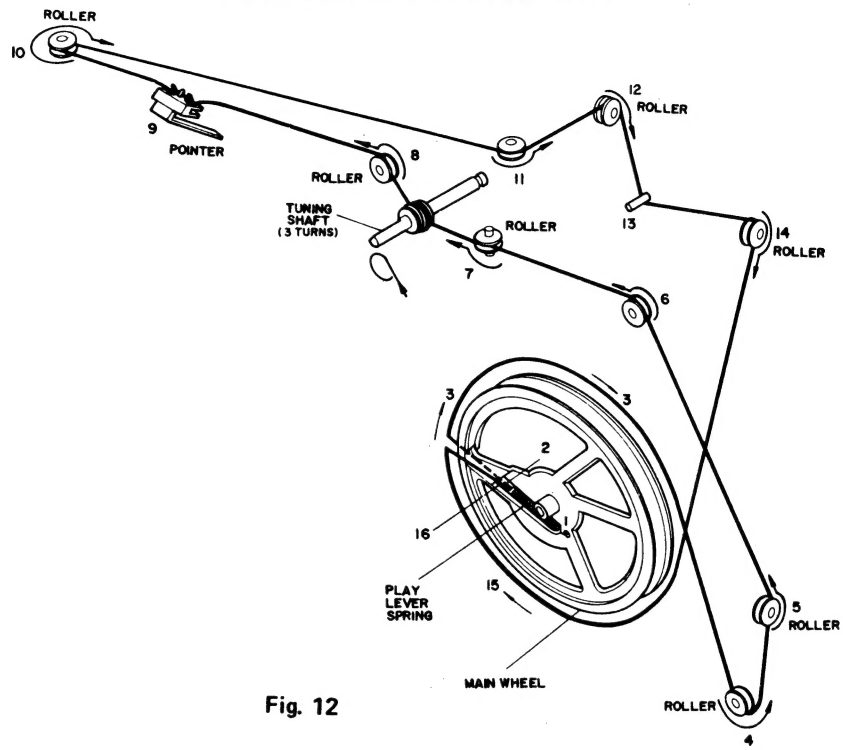


Fig. 12

Set the varicon to minimum frequency and string the cord by following the number sequence order as shown in Fig.12.

ALIGNMENT INSTRUCTIONS

This cassette radio has been aligned at the factory and normally will not require further adjustment. As a result, it is not recommended that any attempt is made to modificate any circuit. If any parts are replaced or if anyone tampers with the adjustment, realignment may be necessay.

Test equipment required

1. AM/FM signal generator
2. IF sweep generator (10.7 MHz) for FM
3. IF sweep generator (455 kHz or 465 kHz) for AM
4. Standard dummy antenna for FM
5. Standard loop antenna for AM
6. VTVM
7. Oscilloscope
8. Frequency counter
9. Audio frequency oscillator
10. Test tapes
    a) MTT-114 (10kHz)
    b) MTT-112B (1kHz)
    c) MTT-501 (Blank tape)

RADIO ALIGNMENT

Adjustment and test points

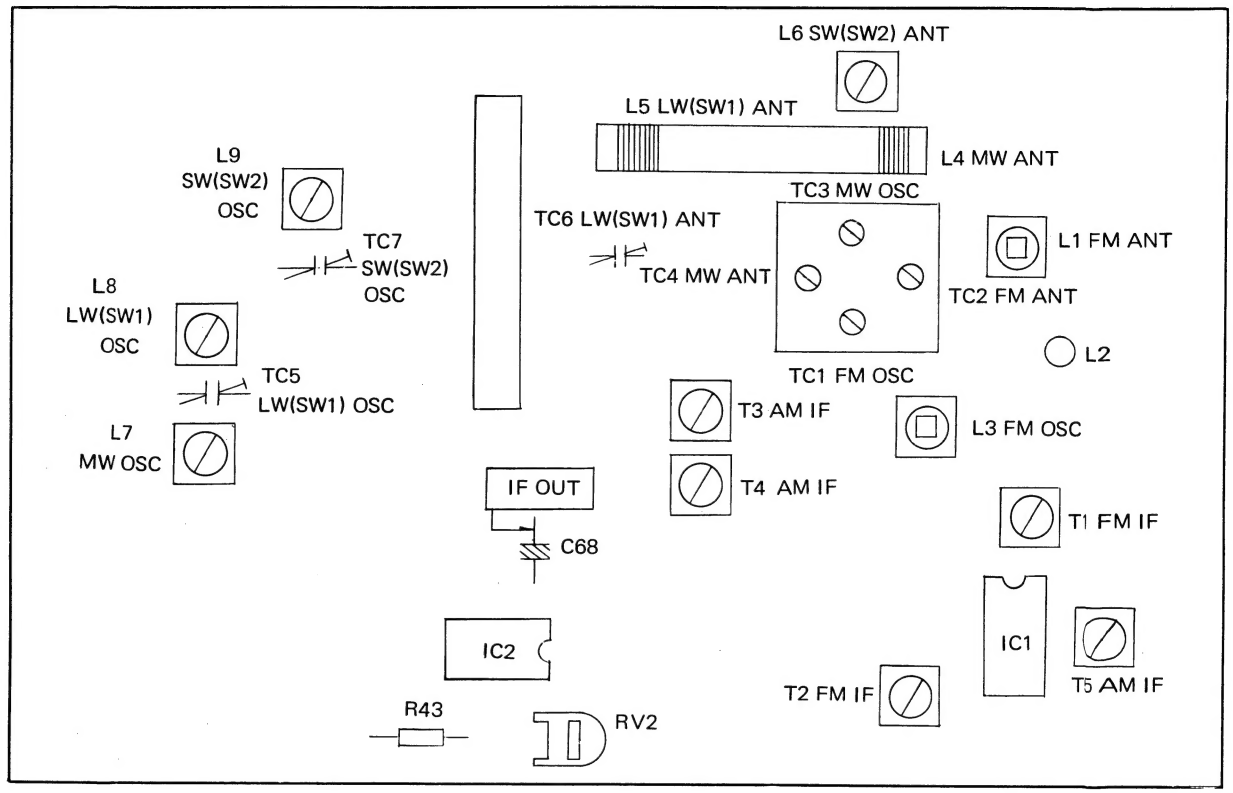


Fig. 13 RF PCB

Note 1.: Adjust T3, T4 and T5 to get maximum gain and symmetry in IF response as shonw in Fig. 14.

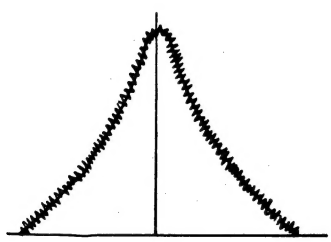


Fig. 14

IF response for weak input signal

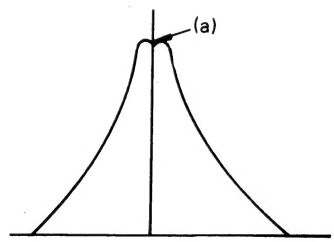


Fig. 15

IF response for strong input signal.

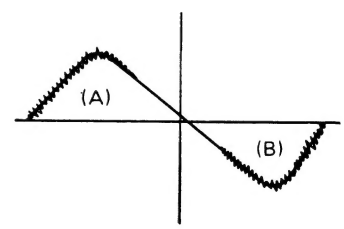
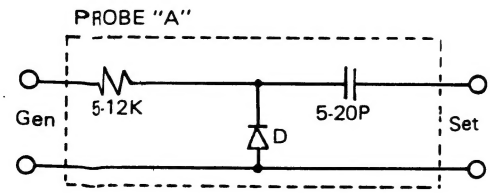
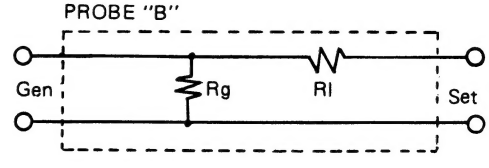


Fig. 16

After adjust. IF response for weak input signal, supply strong input signal and also adjust T3, T4 and T5 to make part (a) flat as shown in Fig. 15.

Note 2.: Adjust T1 so that part (A) and part (B) are symmetrical on either side of vertical line and adjust T2 for maximum noise on s-curve line.





FG: FM SSG Output

RI: $75-\frac{2}{Rg}$

AM Alignment Chart

Step	Item		Instrument & Frequency	Test Point		Dummy Ant.	Dial Setting	Adjustment point	Purpose
				Input Terminal	Output Terminal				
1	AM-IF		AM IF sweep generator and oscilloscope or AM IF genescope	AM IF Input	Detector output (C68)	Generator output Probe "A"	Tuning-Gang counter-clockwise (Lowest freq.)	T3 T4 T5	Adjust for the scope pattern with specified marker (IF freq.) as illustrated in fig. 14 (Note 1)
2	MW Oscilla-tor	a	AM SSG 515kHz (400Hz, 30% Mod) and VTVM	MW wave magnet ant.	Speaker output or detector output	None	Tuning-Gang counter-clockwise (Lowest freq.)	L7	Adjust for maximum gain.
		b	AM SSG 1650kHz (400Hz, 30% Mod) and VTVM				Tuning-Gang clock wise (Highest freq.)	TC3	
		c	Repeat the above item 2-(a), (b) for minimum change.						
3	MW Track-ing	a	AM SSG 600kHz (400Hz, 30% Mod) and VTVM	MW wave magnet ant.	Speaker output terminal or detector output	None	Tune to signal	L4 MW ant. coil	Adjust for maximum gain.
		b	AM SSG 1400kHz (400Hz, 30% Mod) and VTVM					TC4	
		c	Repeat the above item 3-(a), (b) for minimum change						
4	LW (SW1) OSC	a	AM SSG 150kHz (2.3MHz) (400Hz, 30% Mod) and VTVM	LW(SW1) wave magnet ant.	Speaker output terminal or detector output	None	Tuning gang fully counter clockwise (Lowest fre.)	L8	Adjust for maximum gain.
		b	AM SSG 350kHz (7.0MHz) (400Hz, 30% Mod) and VTVM				Tuning gang fully clockwise (Highest fre.)	TC5	
		c	Repeat the above item 4-(a), (b) for minimum change.						

AM Alignment Chart (Cont'd)

Step	Item		Instrument & Frequency	Test Point: Input Terminal	Test Point: Output Terminal	Dummy Ant.	Dial Setting	Adjustment point	Purpose
5	LW (SW1) Tracking	a	AM SSG 160kHz (2.7MHz) (400Hz, 30% Mod) and VTVM	LW(SW1) wave magnet ant.	Speaker output terminal or detector output	None	Tune to signal	L5	Adjust for maximum gain.
		b	AM SSG 330kHz (6.3MHz) (400Hz, 30% Mod) and VTVM					TC6	
		c	Repeat the above item 5-(a), (b) for minimum change.						
6	SW (SW2) OSC	a	AM SSG 6MHz (7MHz) (400Hz, 30% Mod) and VTVM	Ant. intput	Sp. output ter, or detector output	SW dummy ant (Probe "C"))	Tuning gang fully counter clockwise (Lowest fre.)	L9	Adjust for maximum gain.
		b	AM SSG 18MHz (22MHz) (400Hz, 30% Mod) and VTVM				Tuning gang fully clockwise (Highest fre.)	TC7	
		c	Repeat the above item 6-(a), (b) for minimum change.						
7	SW (SW2) Track-ing	a	AM SSG 6.5MHz (8MHz) (400Hz, 30% Mod) and VTVM	Ant. input	Speaker output ter. or detector output	SW dummy ant. (Probe "C")	Tune to signal	L6	Adjust for maximum gain.
		b	AM SSG 16MHz (20MHz) (400Hz, 30% Mod) and VTVM						
		c	Repeat the above item 7-(a), (b) for minimum change.						

FM Alignment Chart

Step	Item		Instruments & Frequency	Test Point: Input Terminal	Test Point: Output Terminal	Dummy Ant.	Dia Setting	Adjustment Point	Purpose
1	FM-IF		FM IF Sweep Generator and oscilloscope or FM IF generating	FM-IF Input	FM Det Output (C68)	Generator Output probe "A"	Tuning Gang fully counter-clockwise (Lowest Fre.)	T1	Adjust for scope Pattern with specified marker (10.7MHz) as illustrated in Fig. 16 (note 2)
	IF-Gain							T2	
2	FM Oscila-tor	a	FM SSG 87 MHz (400Hz 22.5kHz Deviation) and VTVM	Ant. Input	Speaker Output Terminal	Gernator Output Probe "B"	Tuning Gang fully counter-clock wise (Lowest fre.)	L3	Adjust for maximum gain.
		b	FM SSG 109MHz (400Hz, 22.5kHz Deviation) and VTVM	Ant. Input	Speaker Output Terminal	Generator Output Probe "B"	Tuning Gang fully clockwise (Highest fre.)	TC1	Adjust for maximum gain.
		c	Repeat the above item 2-(a), (b) for minimum change.						
3	FM Tracking	a	FM SSG 90MHz (400Hz, 22.5kHz (Deviation) and VTVM	Ant. Input Terminal	Speaker Output Terminal	Generator Output Probe "B"	Tune to signal	L1	Adjust for maximum gain.
		b	FM SSG 106MHz (400Hz, 22.5kHz Deviation) and VTVM	Ant. Input Terminal	Speaker Output Terminal	Generator Output Probe "B"	Tune to signal	TC2	Adjust for maximum gain
		c	Repeat the above item 3-(a), (b) for minimum change.						

FM Multiplex Alignment

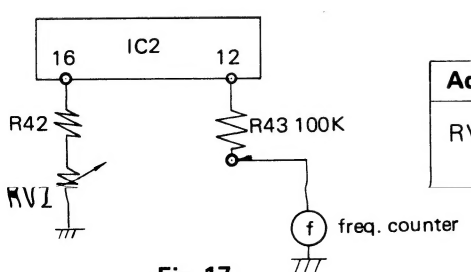


Fig. 17

Adjustment	Remarks
RV-2 (10K-B)	Frequency counter should read 19 KHz ± 0.1 KHz

CASSETTE ALIGNMENT

Tape head and capstan cleaning

1. Periodically clean the tape head, capstan drive shaft and other tape handling surfaces to insure proper tape handling and optimum frequency response.
2. Use a cotton swab lipped in head cleaner or denatured alcohol to clean all tape handling surfaces. Wipe dry.

Tape head demagnetization

When servicing tape unit, do not use magnetized screwdrivers or wrenches near the tape head since they can magnetize the head.
A magnetized head will result in loss of high frequency response and increased noise.

Head adjustment

Head adjustment is normally required when the head is replaced or for cases of cross-talk and poor high frequency response.

Adjustment points

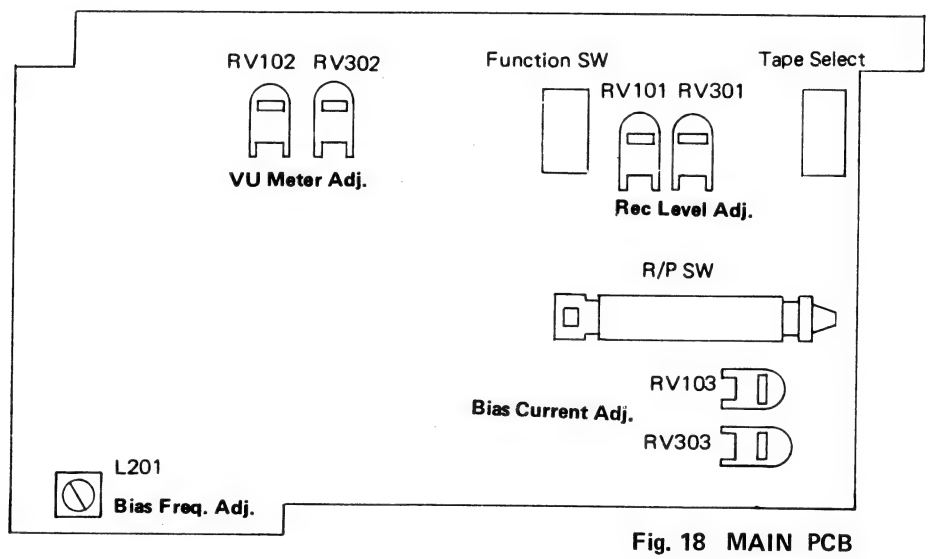
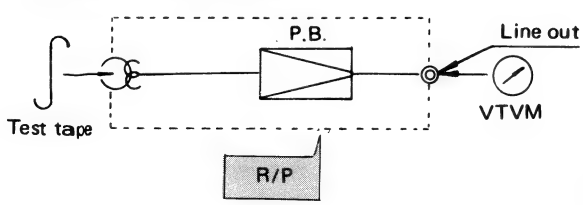


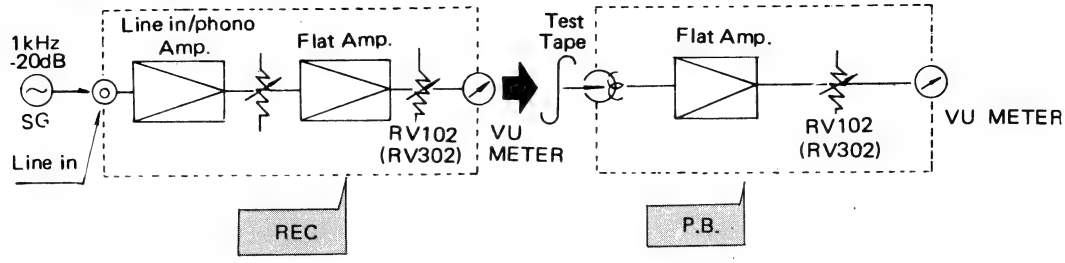
Fig. 18 MAIN PCB

AZIMUTH ADJUSTMENT



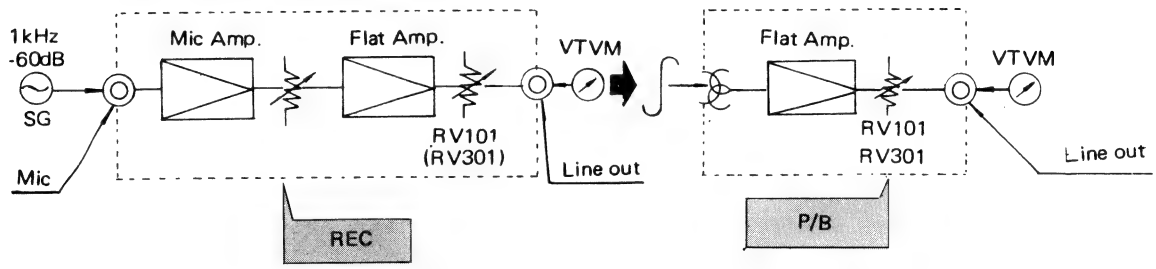
Input	Adjust for	Adjustment
MTT-114 (10kHz)	Maximum	Azimuth adjusting screw

VU METER ADJUSTMENT



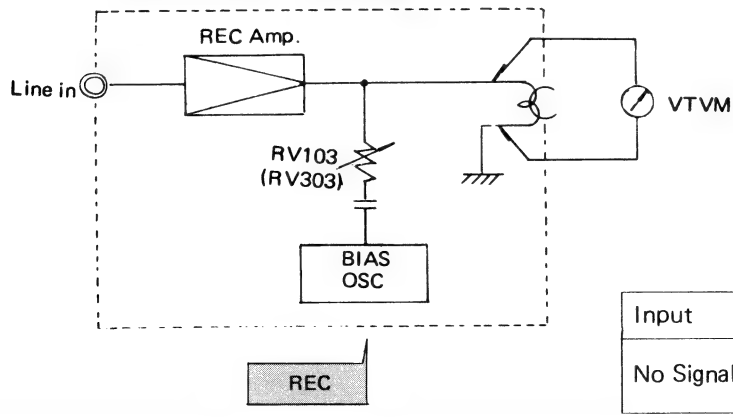
NO.	Input	Adjust for	Adjustment
1	1kHz −20dB	VU METER:0	L: RV102 R: RV302
2	MTT-112B (1kHz)	VU METER: +3	L: RV102 R: RV302

REC LEVEL ADJUSTMENT



NO.	Input	Adjust for	Adjustment	Remark
1 (REC/PB)	1kHz −60dB	A	L: RV101 R: RV301	REC MODE: AUTO TAPE SEL.: NOR
2 (P/B)	MTT-112B (1kHz)	Lower about 4dB than A	Confirm	"

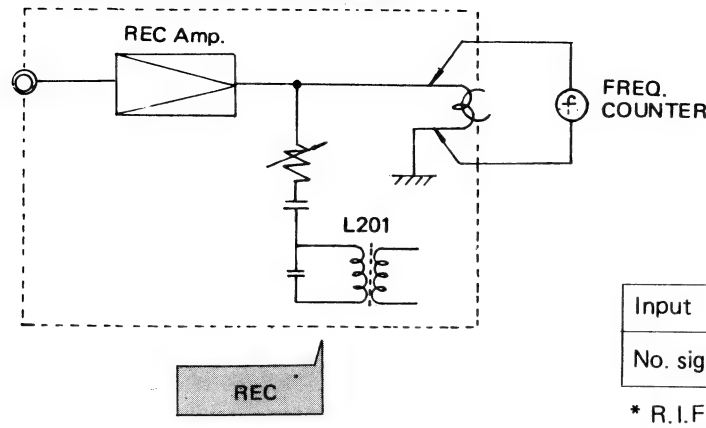
BIAS CURRENT ADJUSTMENT



Input	Adjust for	Adjustment
No Signal	AC 10V±0.5V	L: RV103 R: RV303

* Tape select : Normal position

BIAS FREQUENCY ADJUSTMENT



Input	Adjust for	Adjustment
No. signal	70±3kHz	L201

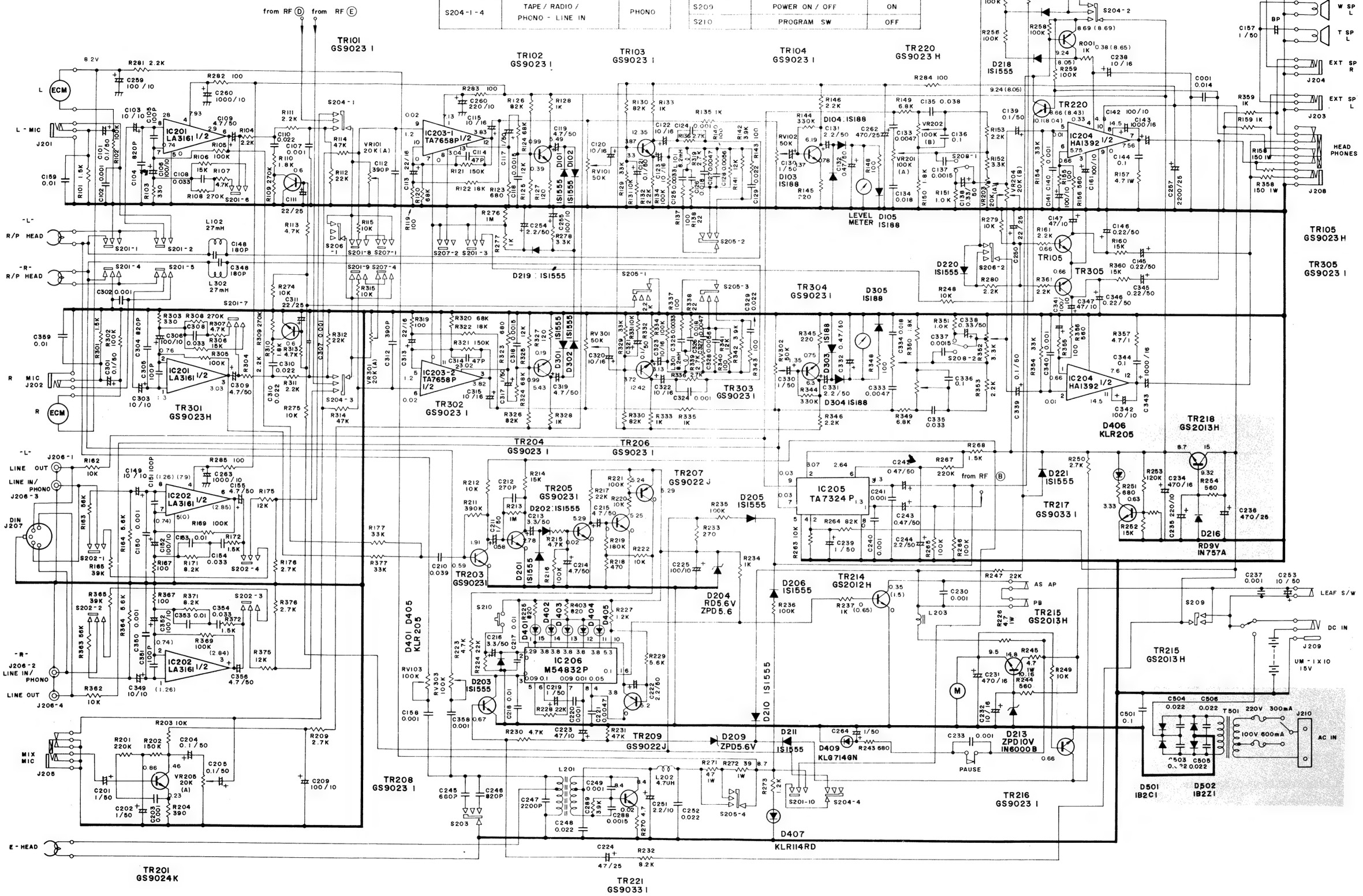
* R.I.F S/W: "2" position

SCHEMATIC DIAGRAM AF

This schematic diagram is subject to change for improvement.

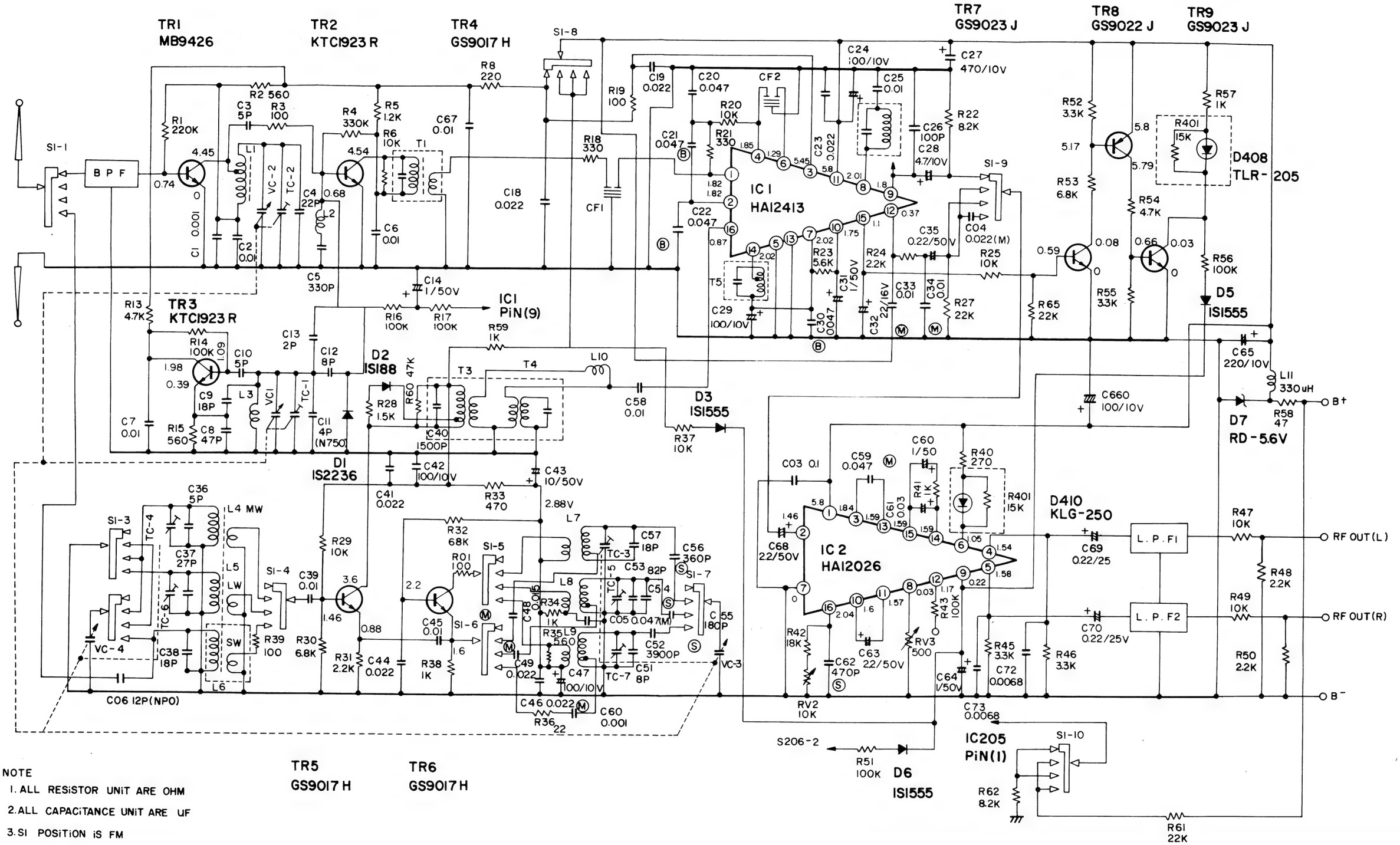
SW NO	NAME	MODE
S201-1-10	REC / PLAY	PLAY
S202-1-4	PHONO / LINE IN	PHONO
S203	RIF	
S204-1-4	TAPE / RADIO / PHONO - LINE IN	PHONO

S205-1-3	NOR / CrO2 / METAL	NOR
S206-1-3	MONO / ST / WIDE	MONO
S207-1-4	REC MODE (MAN/AUTO)	MANUAL
S208	LOUDNESS	OFF
S209	POWER ON / OFF	ON
S210	PROGRAM SW	OFF



SCHEMATIC DIAGRAM RF (TSR-800)

This schematic diagram is subject to change for improvement.

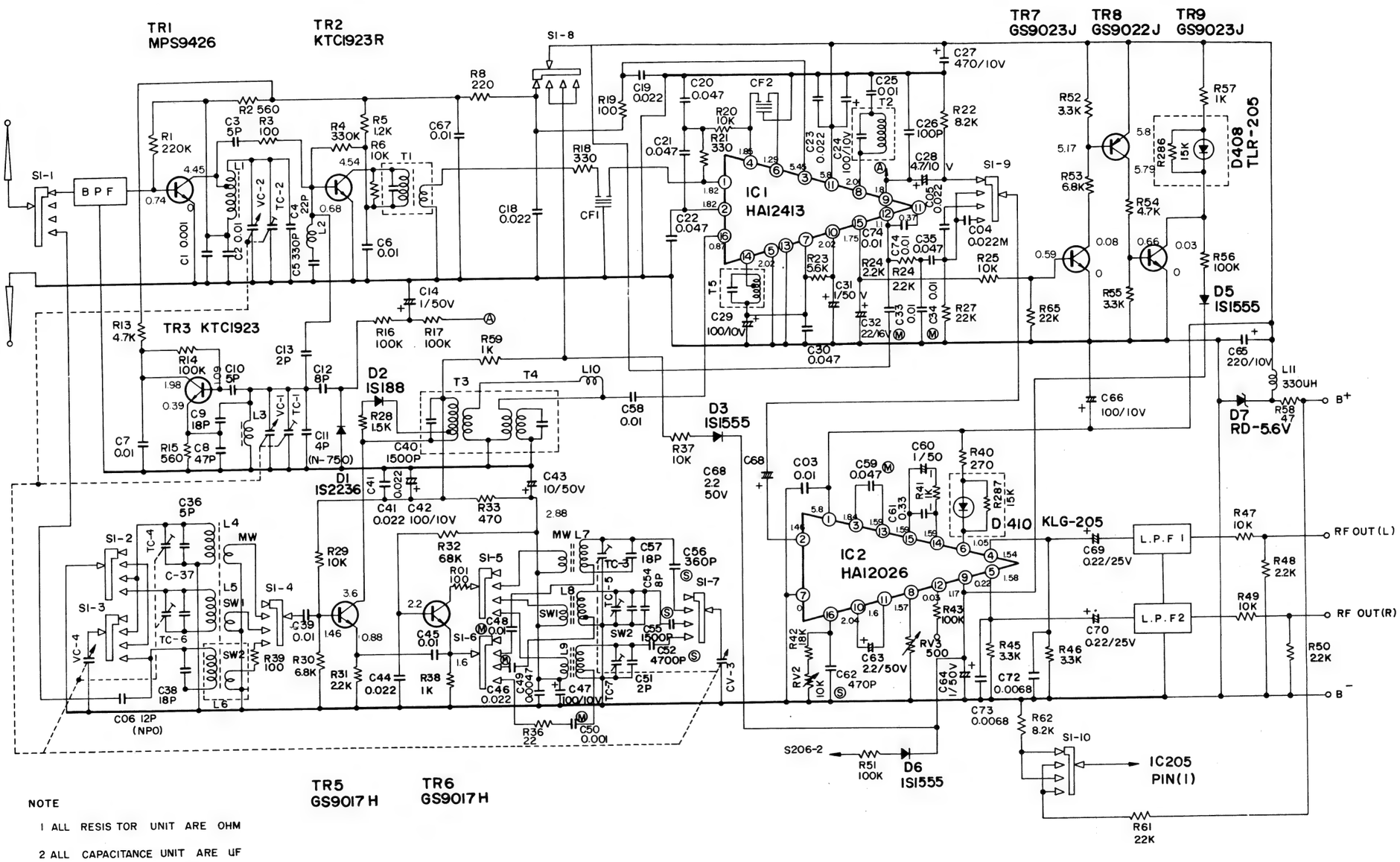


NOTE

1. ALL RESiSTOR UNiT ARE OHM
2. ALL CAPACiTANCE UNiT ARE UF
3. SI POSiTiON iS FM

SCHEMATIC DIAGRAM RF (TSR-805)

This schematic diagram is subject to change for improvement.



NOTE

1 ALL RESIS TOR UNIT ARE OHM

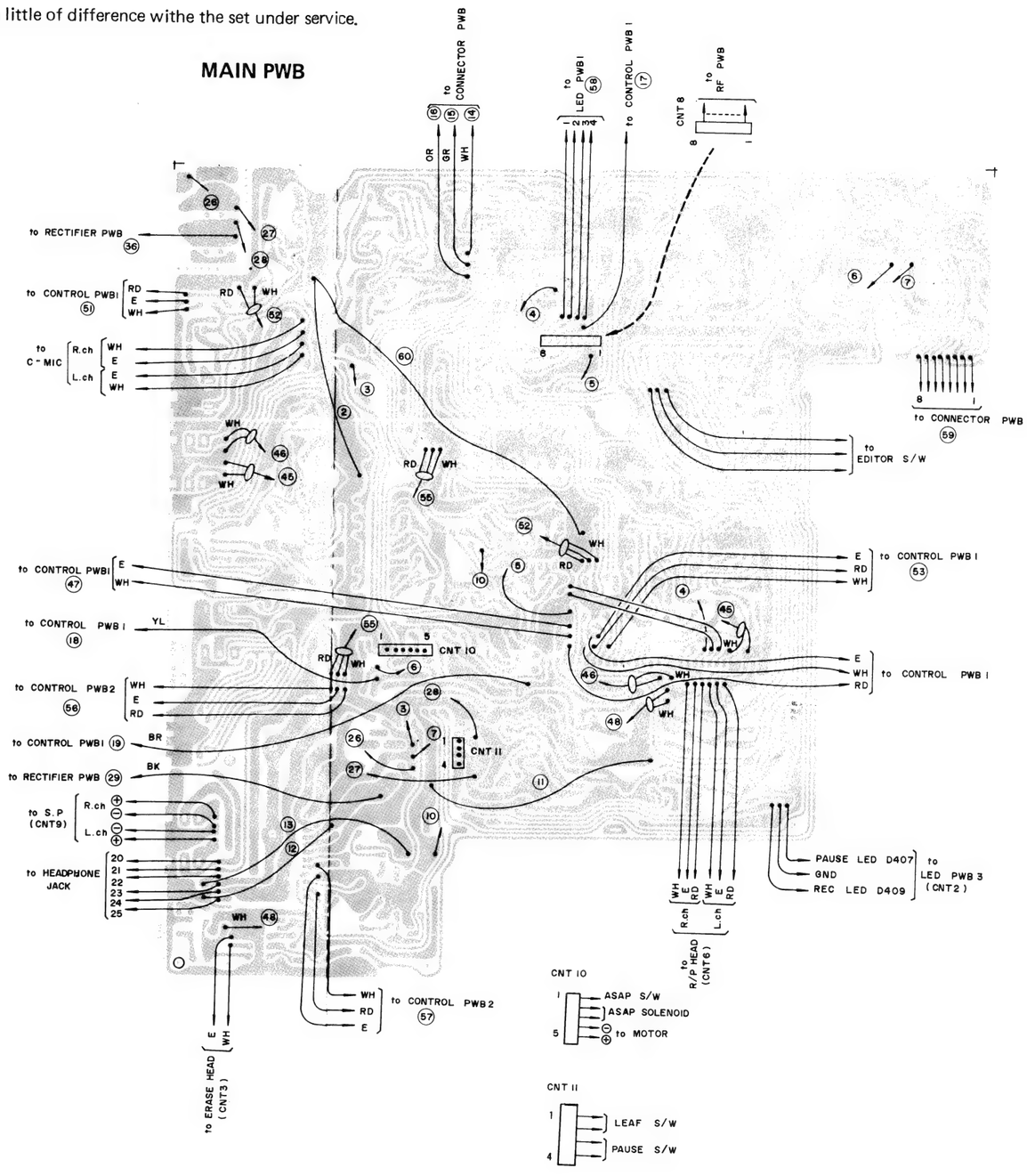
2 ALL CAPACITANCE UNIT ARE UF

3 SI POSITION IS FM

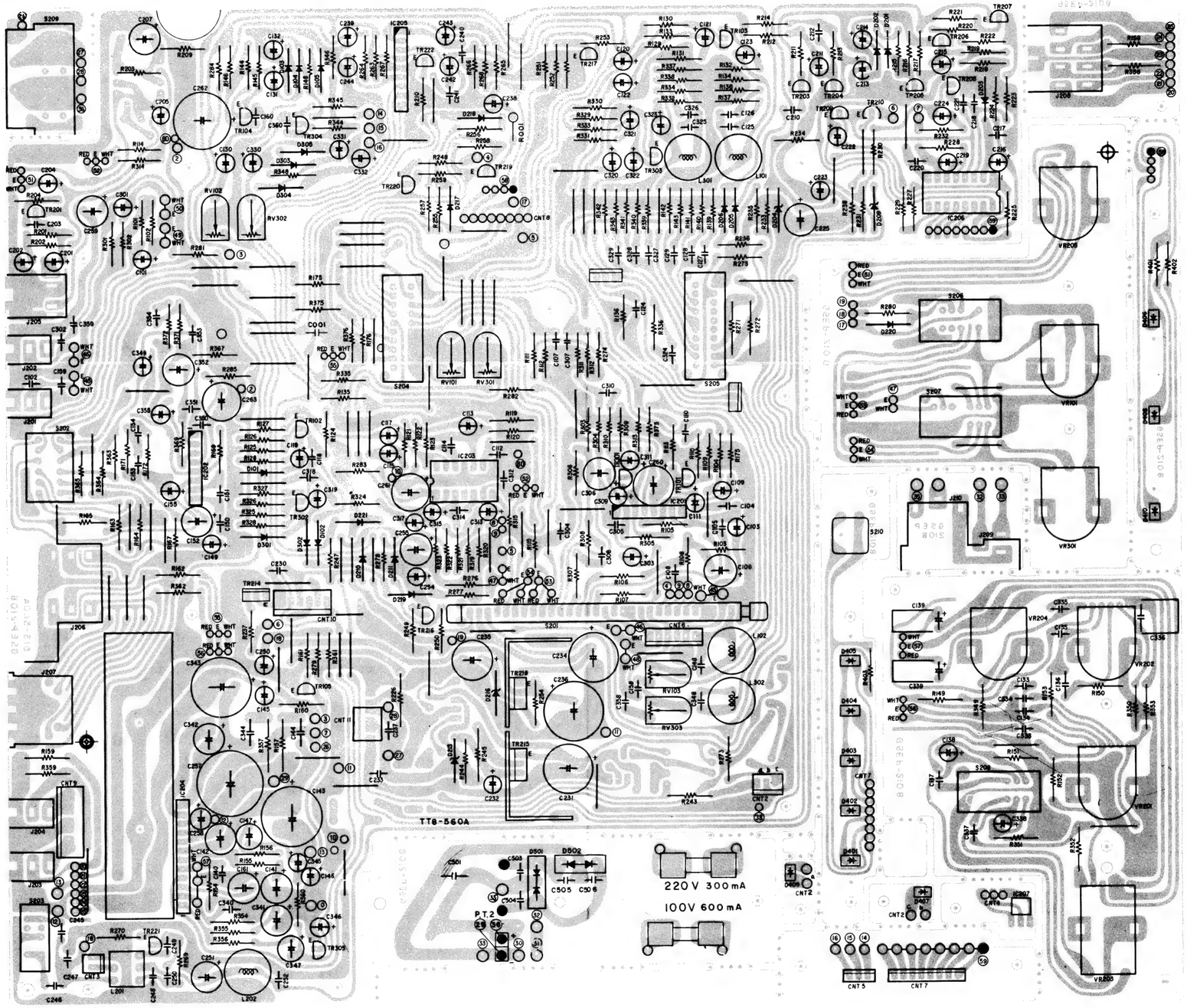
ELECTRICAL PARTS LOCATIONS AND WIRING

This circuity pattern and printing may be made a little of difference withe the set under service.
When servicing the set, please make sure of.

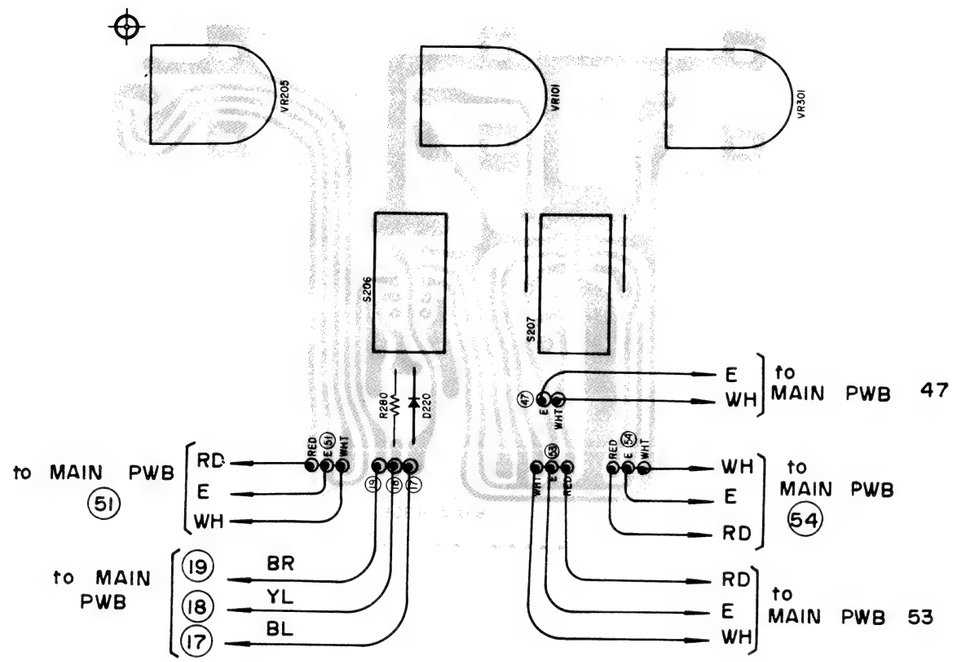
MAIN PWB



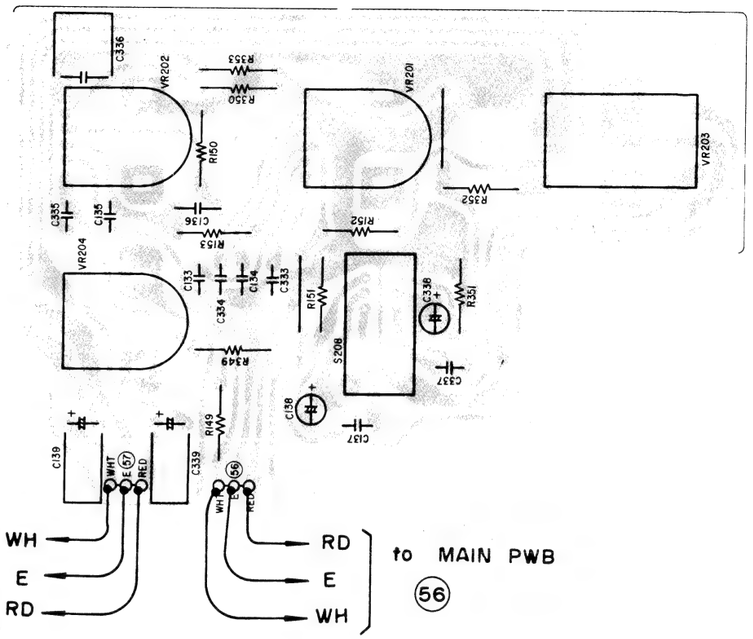
MAIN PWB



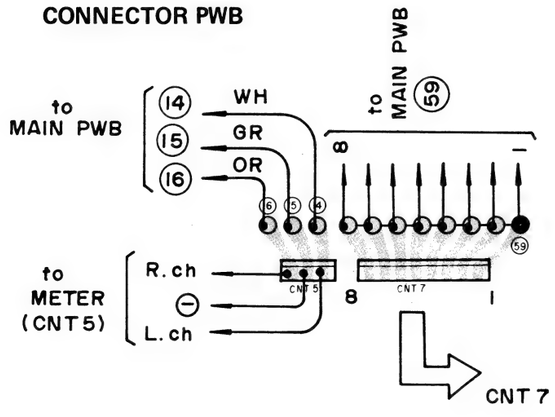
CONTROL PWB 1



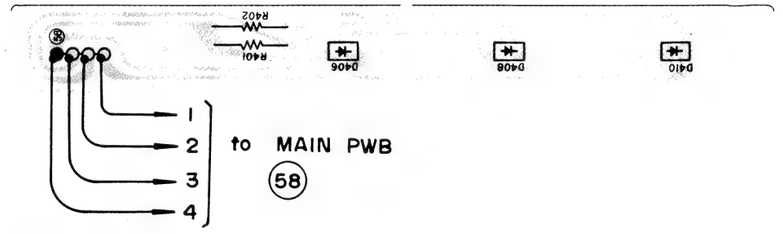
CONTROL PWB 2



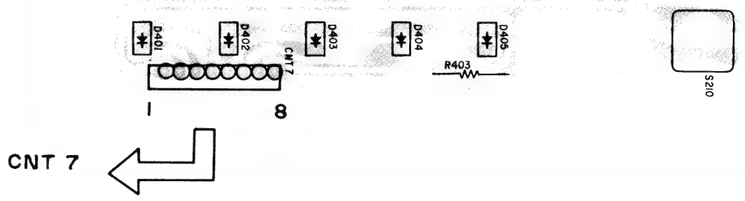
CONNECTOR PWB



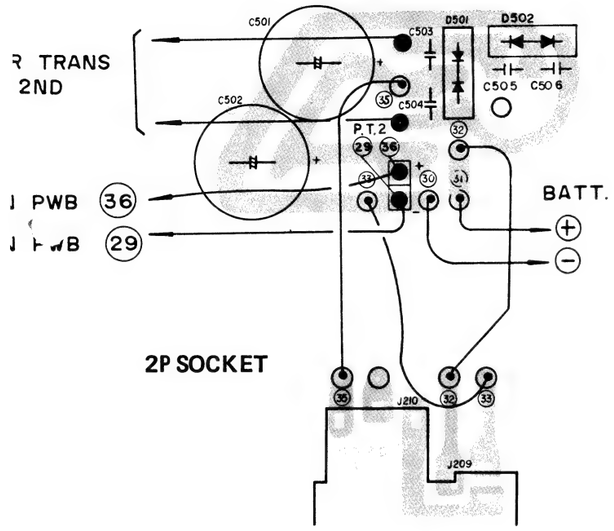
LED PWB 1



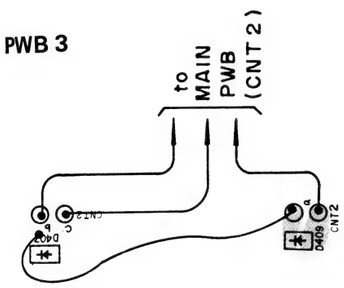
LED PWB 2



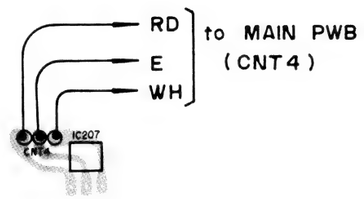
RECTIFIER PWB



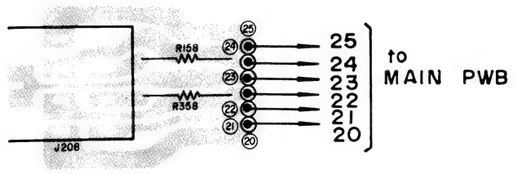
LED PWB 3



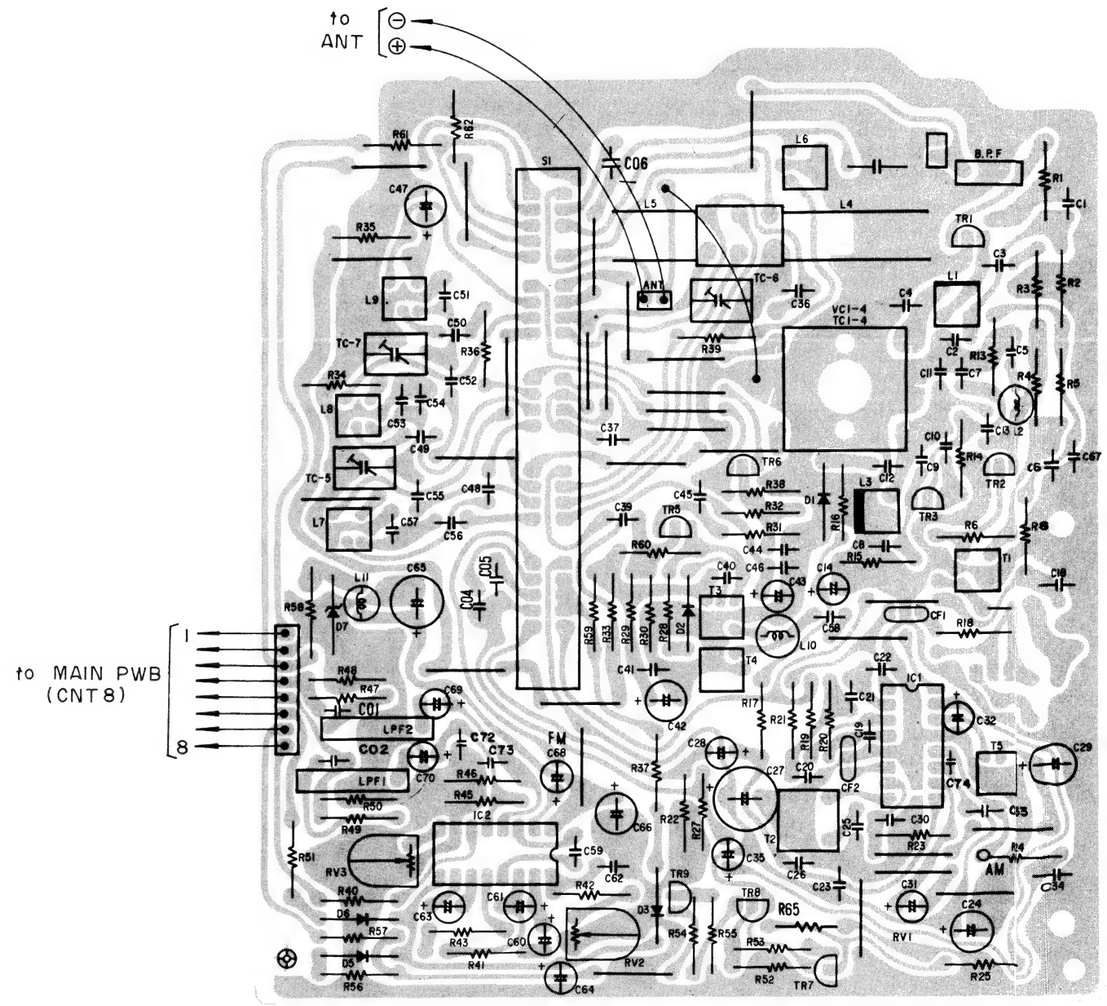
HALL IC



HEADPHONE JACK



RF PWB

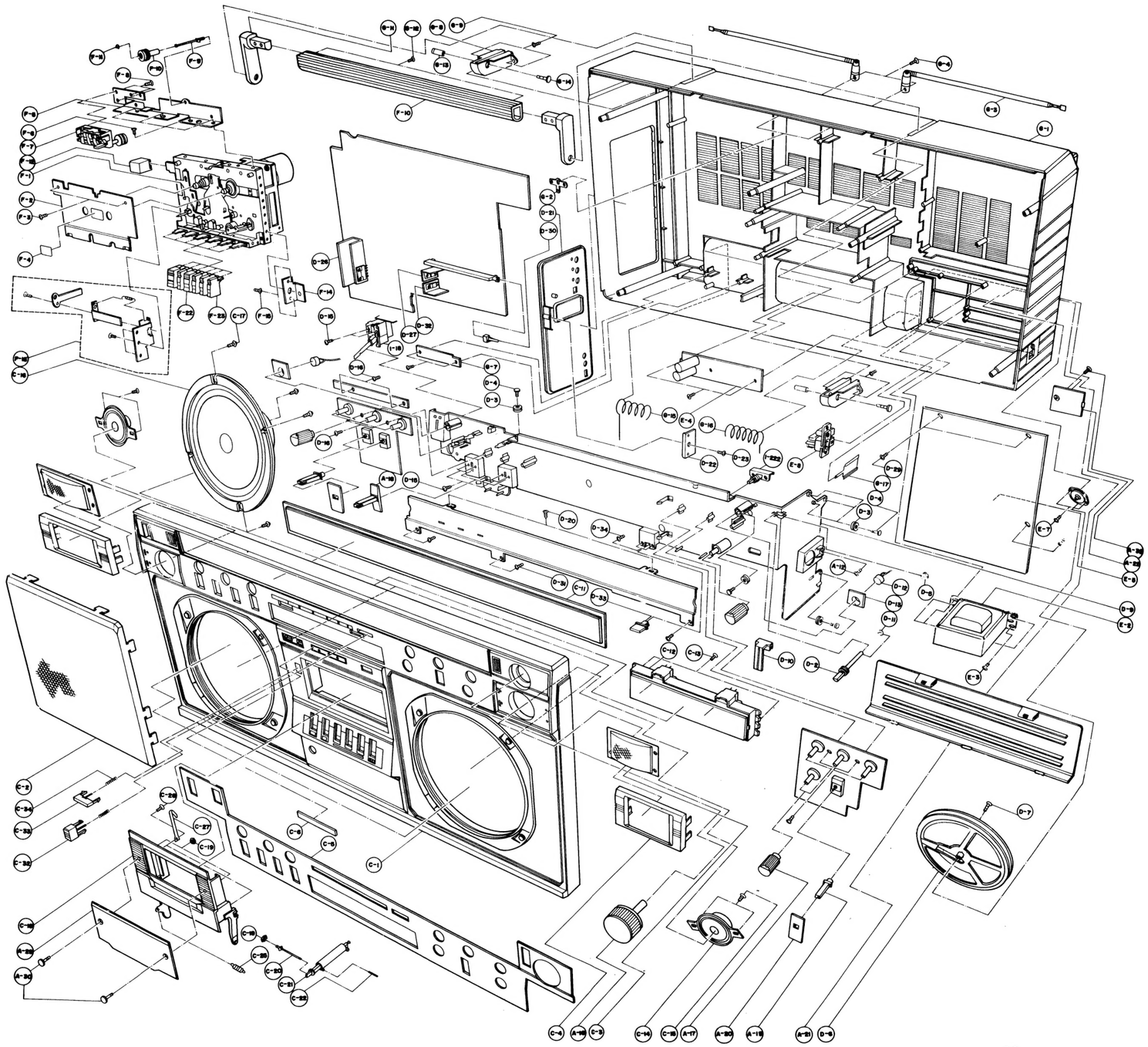


ELECTRICAL SERVICE PARTS LIST

SYMBOL NO.	PART NO.	DESCRIPTION
INTEGRATED CIRCUITS		
IC1	668-161A	IC, HA12413
IC2	668-618A	IC, HA12026
IC201	668N063A	IC, LA3161
IC202	668N063A	IC, LA3161
IC203	668-622A	IC, TA7658P
IC204	668-625A	IC, HA1392
IC205	668-620A	IC, TA73249
IC206	668-623A	IC, M54832P
TRANSISTORS AND DIODES		
TR1	662-601A	TR, MPS426B
TR2, 3	665-819A	TR, KTC 1923-R
TR5, 6	662-007D	TR, MPS 9604H
TR7	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR8	662N039D	TR, MPS 9461AJ
	665-841A	TR, KTC 9012AH
TR9	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR101-105	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR201	662-026B	TR, MPS 9633B
TR203, 204	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR207	662N039D	TR, MPS 9461AJ
	665-841A	TR, KTC 9012AH
TR208	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR209	662N039D	TR, MPS 9416AJ
	665-841A	TR, KTC 9012AH
TR214	662N018B	TR, MJE 9400
TR215	664-601B	TR, KTD-880Y
TR216	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR217	662-020B	TR, MPS 9418AJ
TR218	664-601B	TR, KTD-880Y
TR219	662N039D	TR, MPS 9461AJ
	665-841A	TR, KTC 9012AH
TR220	662N033D	TR, MPS 9411AJ
	665-840A	TR, KTC 9013AH
TR221	662-020B	TR, MPS 9418AT
TR301, 302	662N033D	TR, MPS 9411AJ
303, 304, 305	665-840A	TR, KTC 9013AH
D1	654-418A	DIODE, 1S2236
D2	651-001C	DIODE, AM 1K60
D3, 5, 6	652T605B	DIODE, 1S2472
D7	654-608D	DIODE, ZPD 5.6
D101, 102	652T605B	DIODE, 1S2472
D103, 104 105	652-001C	DIODE, AM1K60
D201, 202, 203	652T605B	DIODE, 1S2472
D204	654-608D	DIODE, ZPD 5.6
D205, 206	652T605B	DIODE, 1S2472
D209	654-608D	DIODE, ZPD 5.6
D210, 211	652T605B	DIODE, 1S2472
D213	654-612B	DIODE, ZPD10
D216	654-623F	DIODE, UZ9.18
D217	652T605B	DIODE, 1S2472
D218, 219, 220, 221	652T-605B	DIODE, 1S2472
D301, 302	652T605B	DIODE, 1S2472
D303, 304, 305	651-001C	DIODE, AM1K60
D401-406	653-618A	LED, TLR-205
D407	653-022A	LED, KLR114
D408	653-618A	LED, TLR-205
D409	653-023A	LED, KLG114
D410	653-618B	LED, KLG205
D501	652-021C	DIODE, MI-151
D502	652-021D	DIODE, MI-151R

SYMBOL NO.	PART NO.	DESCRIPTION
COILS AND TRANSFORMERS		
L1	635-020E	COIL, FM OSC
L2	635-602A	COIL, FM RF
L3	635-003B	COIL, FM OSC
L4, 5	632-042B	COIL, MW/LW ANT (FOR TSR-800)
	632-042A	COIL, MW/SW1 ANT (FOR TSR-805)
L6	634-020F	COIL, SW ANT (FOR TSR-800)
	634-020D	COIL, SW2 ANT (FOR TSR-805)
L7	634-015C	COIL, MW OSC
L8	634-037F	COIL, LW OSC (FOR TSR-800)
	634-020B	COIL, SW1 OSC (FOR TSR–805)
L9	634-020E	COIL, SW OSC (FRO TSR-800)
	634-020C	COIL, SW2 OSC (FOR TSR-805)
L10	639-003L	COIL, PADDING 180 μH
L11	636-006D	COIL, CHOKE 300 μH
L101, 301	637-601F	COIL, PEAKING 8.2 mH
L102, 302	637-005D	COIL, PEAKING 27 mH
L201	634-036C	COIL, TAPE OSC
L202	639-003I	COIL, PADDING 4.7 μH
T1	644-018F	TRANS, FM IF
T2	647-604D	DISCRIMINATOR
T3	644-019D	TRANS, MW IF
T4	644-019G	TRANS, MW IF
T5	644-039N	TRANS, MW IF
SWITCHES AND VARIABLE RESISTORS		
S1	551-618A	S/W, SRZU 104N-BAND
S201	552-035F	S/W, CL110K-REC/PLAY
S202	552N077A	S/W, KSA4251-PHONO/LINE IN
S203	552-614A	S/W, KSA2317-RIF
S204, 205	556-614A	S/W, SLLO13002-TAPE/RADIO/ PHONO-LINE IN (located on p.c. board)
	552-621A	S/W, SSR243002-TAPE/RADIO/ PHONO-LINE IN (located on front case)
S206	556N053A	S/W, SLE 62301–MONO/ST/WIDE
S207	556-615A	S/W, SLE 64215–MANUAL/AUTO
S208	556N052B	S/W, SLE 622–LOUDNESS
S209	556-612C	S/W, HTW3405-01-2105-01–POWER
S210	558-013A	S/W, KHC10902-PROGRAM
RV2	613-021E	VR, SEMI-FIXED 10KB
RV3	613-021A	VR, SEMI-FIXED 500B
RV101, 301	613-021G	VR, SEMI-FIXED 50KB
RV102, 302	613-021G	VR, SEMI-FIXED 50KB
RV103, 303	613-021H	VR, SEMI-FIXED 100KB
VR101, 301	611-639A	VR, 20KA–REC LEVEL
VR201	611-640A	VR, 100KA–TREBLE
VR202	611-640B	VR, 100KB–BASS
VR203	611-641B	VR, 20KA–VOLUME
VR204	611-639B	VR, 20KW–BALANCE
VR205	611-639A	VR, 20KA–MIXING
MISCELLANEOUS		
LPF1, LPF2	616-009A	FILTER, LOW PASS
BPF	616-011A	FILTER, BAND PASS
CF1, CF2	616-007A	FILTER, CERAMIC
VC1-4	622N048E	VARICON, POLY P2Z-22BPT
TC5	623N023H	TRIMMER, 20P (FOR TSR-800)
	623N023B	TRIMMER, 20P (FOR TSR-805)
TC6, 7, 8	623N023B	TRIMMER, 8P
J201-204	572-042B	JACK–MIC/EXT. SP
J205	572-158A	JACK-MIX MIC.
J206	573-080B	SOCKET-LINE IN/PHONO
jJ207	573-051B	SOCKET-DIN
J207	573-051B	SOCKET–
J207	573-051B	SOCKET-DIN

EXPLODED VIEW FOR CABINET

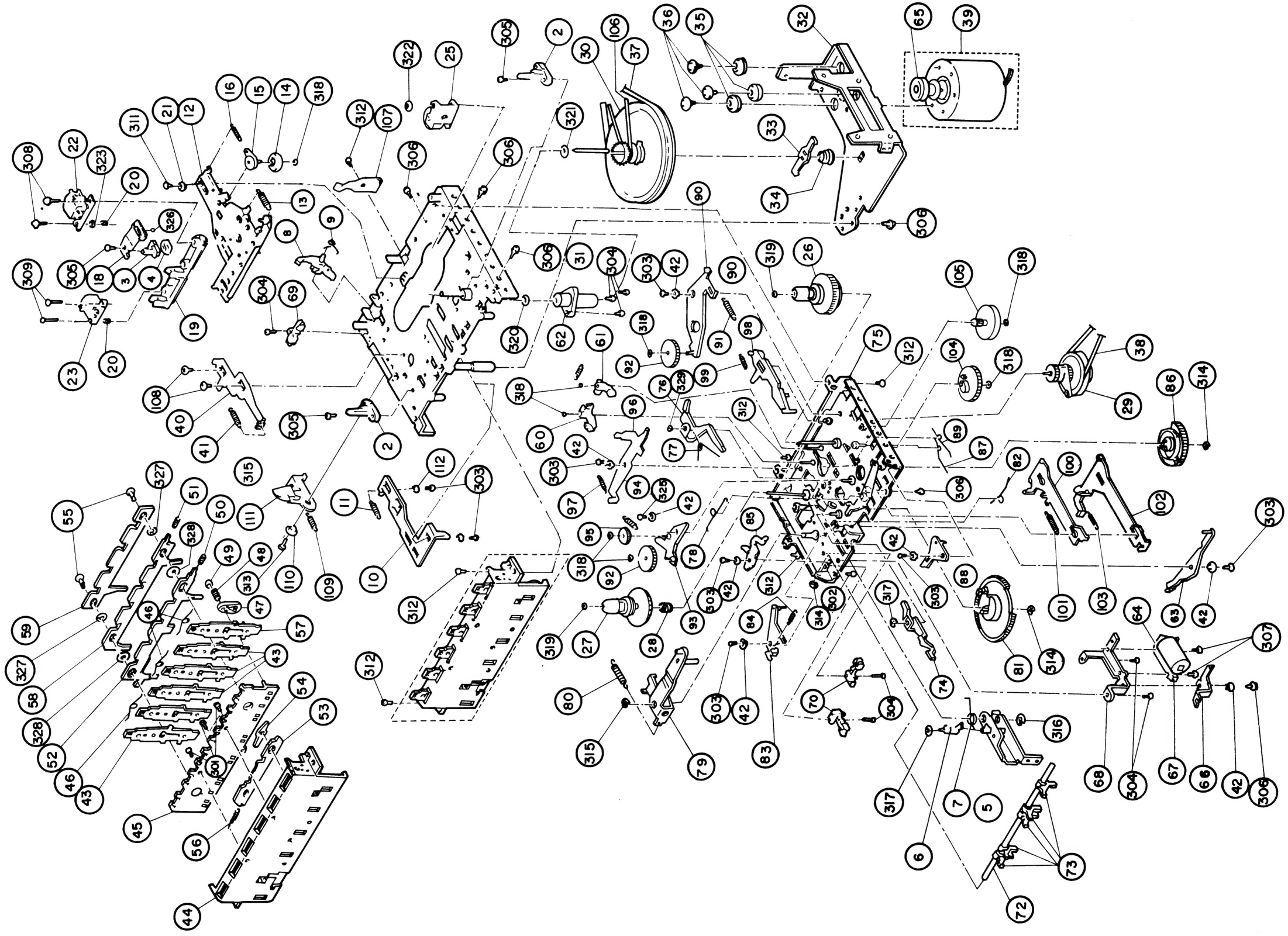


MECHANICAL PARTS LIST FOR CABINET EXPLODED VIEW

Note: The part-no on this parts list are subject to change.

SYMBOL NO.	PART NO.	DESCRIPTION
A-11	353NO71D	SCREW, SPECIAL
A-12	353NO25F	SCREW SPECIAL
A-13	353-052C	SCREWSPECIAL
A-14	353-025G	SPECIAL SCREW
A-16	271-159A	KNOB, TUNING
A-17	273-657A	KNOB CONTROL
A-18	273-653A	KNOB, SWITCH (A)
A-19	273-654A	KNOB, SWITCH (B)
A-20	221-907A	COVER, KNOB
A-21	221-432A	COVER BATTERY
A-22	221N410G	COVER VOL SELECTOR
A-23	217N224A	CASE, BATTERY
A-25	542-028A	MICROPHONE
A-27	681-010A	CORD POWER
A-28	591NO10A	ADAPTER (EXPORT 110V /220)
A-29	236-160A	WINDOW, CASSETTE COVER
A-30	353-615A	SCREW, DECO
A-32	353NO25C	SCREW, SPECIAL
A-33	324-472A	HOLDER MIC AY
C	215-536B	CASE, FRONT AY
C-1	217-308A	CASE FRONT
C-2	224-041A	GRILLE, WOOFER
C-3	224-043A	GRILLE, tweeter metal
C-4	224-042A	GRILLE, SPEAKER TWEETE
C-5	251-626F	PLATE, DECORATION
C-6	241-103A	MARK, GOLD STAR
C-7	562-0500	LUG
C-8	353NO25G	SCREWSPECIAL
C-9	246-214A	DECORATION LED (A)
C-10	246-215A	DECORATION LED (B)
C-11	236-161A	WINDOWSCALE
C-12	518-623A	METER VUY176-A
C-13	353-052C	SCREWSPECIAL
C-14	541-139A	SPEAKER 050N06-1350F
C-15	353-052C	SCREWSPECIAL
C-16	541-158B	SPEAKER
C-17	353NO71E	SCREW, SPECIAL
C-18	226-612A	DOOR CASSETTE
C-19	NHA1800J	NUT, NH1-3 FZMY
C-20	423-294A	SHAFT, PULLEY DOOR
C-21	444-002A	DAMPER-AIR, KUGAMI SEIKI (K-104)
C-22	423-295A	SHAFT, DAMPER
C-23	321-743B	BRACKET DOOR CST
C-24	353N025G	SCREW SPECIAL
C-25	441-005C	SPRING EJECT
C-26	324-640A	HOLDER LED AMSS
C-27	442-671C	SPRING CASSETTE
C-28	TOQ1536J	SCREW
C-29	353NO25G	SCREW SPECIAL
C-30	353NO25G	SCREW SPECIAL
C-31	572-034A	JACK, PHONE
C-32	273-659A	KNOB, EJECT
C-33	273-658A	KNOB AMSS
C-34	441-004A	SPRING EJECT AMSS
C-35	321-779A	BRACKET DOOR CST
C-36	445NO25B	SPACER, CLOTH
C-37	353NO25H	SCREW
C-38	354-602D	WASHER
D	311-618B	CHASSIS AY
D-1	313-216A	CHASSIS
D-2	423N397B	SHAFT TUNING
D-3	434N031A	ROLLER
D-4	423N254A	SHAFT, ROLLER
D-5	434-018A	Roller
D-6	432NO38A	PULLEY DIAL
D-7	MPC1536J	SCREW, MPC+2.6x8
D-8	442-004X	SPRING
D-10	361-608A	POINTER
D-11	WEO1800Q	E-RING, WED-3SK5 8K
D-12	542NO23A	CONDENSER MIC EM-80 PRIMO
D-13	341N105A	BUSHING MIC
D-14	423-296A	SHAFT, BAND SELECT
D-15	MPC1830J	SCREW, MPC+3x6
D-16	353NO25G	SCREW SPECIAL
D-19	251-627C	PLATE, SCALE
D-20	353-052J	SCREW, WPECIAL
D-21	235-005A	BOARD, JACK (DIN)
D-22	324-458A	HOLDER, JACK
D-23	353NO25G	SCREW SPECIAL
D-24	262NO56A	LOG, GND
D-25	353NO25L	SCREW, SPECLAL 3x10 FCRM
D-26	255-091A	HEAT SINK (A)
D-27	255-092A	HEAT SINK (B)
D-28	TRQ1836J	SCREW, TRQ+3x8 MSWR3 FZMY
D-29	363-052C	SCREW SPECIAL
D-30	321-747A	BRACKET REC S/W
D-31	353NO25C	SCREW SPECIAL
D-32	255-092B	HEAT SINK (B)
D-33	273-238C	KNOIB, SWITCH
D-34	MPC1830J	SCREW, MPC+4x6
D-35	354-602F	WASHER
E	321-748B	BRACKET POWER AY
E-2	641-679C	POWER TRANS 220V
E-3	353NO71E	SCREW, SPECIAL (M4x10)
E-4	353-052C	SCREW SPECIAL
E-5		
E-6		
E-7		
E-8	577-004A	SOCKET AC-IN
F	411-029A	MECHANISM DECK AY
F-1	412-068B	DECK MECHANISM TN77 M-193
F-1-1	451-145A	BELT, COUNTER (A)
F-1-2	451-145B	BELT, COUNTER (B)
F-2	251-628A	PLATE, DECO CST
F-3	MPC1522L	SCREW M+2.6FCR
F-4	256N261A	PLATE REFLECTION
F-5	321-739A	BRACKET DECK (A)
F-6	353NO22A	SCREW, SPECIAL
F-7	517-102A	COUNTER SINMEL T3ARS1
F-8	MPC1830J	SCREW, MPC+3x6
F-9	423-294D	SHAFT, PULLEY DOOR
F-10	432-609B	PULLEY, COUNTER
F-11	WEOO500P	E-Ring D1.5
F-12	322-144A	SUPPORTER, EJECT LEVER
F-13	TRQ1836J	SCREW, TRQ2+3x8 MSWR+ FZMY
F-14	321-740A	BRACKET, DECK (B)
F-15	353NO22A	SCREW, SPECIAL
F-16	321-787A	BRACKET, DECK (C)
F-17	353NO22A	SCREW, SPECIAL
F-18	321-744A	BRACKET, RECORD
F-19	442-657A	SPRING REC PLATE
F-20	353NO22A	SCREW, SPECIAL
F-21		
F-22	273-655A	KNOB, CST (A)
F-23	273-656A	KNOB, CST (B)
G	215-537B	CASE, REAR AY
G-1	217-309A	CASE REAR
G-2	562NO55A	LUG
G-3	532-007C	ANTENNA ROD
G-4	MAC1845L	SCREW, MAC+3x18FNM
G-5	562-050N	LUG
G-6	353NO25G	SCREW SPECIAL
G-7	353NO25G	SCREW SPECIAL
G-8	321-745A	BRACKET HANDLE
G-9	353NO25G	SCREW SPECIAL
G-10	261NO89D	HANDLE
G-11	324-639A	HOLDER, HANDLE
G-12	MAC1843L	SCREW, MAC+3x14 FNM
G-13	423-297A	SHAFT, HANDLE
G-14	423-286A	SHAFT HANDLE HOLDER
G-15	442N261B	SPRING BATTERY (A)
G-16	442N262A	SPRING BATTERY (B)
G-17	563N126A	TERMINAL BATTERY

EXPLODED VIEW FOR DECK MECHANISM



PARTS LIST FOR DECK MECHANISM EXPLODED VIEW

NO.	PARTS NAME	PART NO.	NO.	PARTS NAME	PART NO.
2	CASSETTE GUIDE	99T-0001	60	BRAKE ARM (L) ASS'Y	99T-0022
3	GUIDE PIN	99T-0002	61	BRAKE ARM (R) ASS'Y	99T-0023
4	GUIDE PIN CUSHION	99T-0003	64	COIL ASS'Y	99T-0024
6	SENSING PIECE	99T-0004	66	KICK LEVER	99T-0025
8	REC. SAFETY LEVER	99T-0005	69	SWITCH	99T-0026
18	PANNEL PRESS PLATE	99T-0006	70	SWITCH	99T-0027
19	HEAD BASE	99T-0007	98	SENSING PLATE	99T-0028
22	R.P. HEAD	99T-0008	104	CAM GEAR	99T-0029
23	E. HEAD	99T-0009	106	BELT	99T-0030
25	PINCH ROLLER ASS'Y	99T-0010	197	PACK HOLD SPRING	99T-0031
26	TAKE UP REEL ASS'Y	99T-0011	109	EJECT LEVER SPRING	99T-0032
27	SUPPLY REEL ASS'Y	99T-0012	111	EJECT LEVER	99T-0033
29	R.F. CLUTCH ASS'Y	99T-0013	304	C TAPPING SCREW 2x5	99T-0034
37	MAIN BELT	99T-0014	305	C TAPPING SCREW 2x6	99T-0035
38	R.F. BELT	99T-0015	308	CAP SCREW 2x10	99T-0036
39	MOTOR ASS'Y	99T-0016	312	C TAPPING SCREW 2.6x4	99T-0037
43	BUTTON LEVER ASS'Y	99T-0017	319	POLYSLIDER WASHER	99T-0038
46	BUTTON LEVER SPRING	99T-0018	322	POLYSLIDER WASHER	99T-0039
50	FUNCTION LEVER SPRING	99T-0019	326	STEEL BALL 2.0	99T-0040
51	FUNCTION LEVER SPRING	99T-0020			
55	FUNCTION LEVER STOPPER	99T-0021			